Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-30 are pending in the application, with 1, 6, 13, 20 and 28 being the independent claims. Claim 30 has been amended to remedy a typographical error. This change is believed to introduce no new matter and does not further limit the scope of the claims in any way. Therefore, its entry is respectfully requested.

Claims 1 and 5-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,906,940 to Greene *et al.* (hereinafter "Greene"). Claims 2-4 have been indicated as being allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims.

The Applicant would like to thank the Examiner for the indication that the drawings filed December 18, 2001 have been accepted.

Based on the above amendment and the following Remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and they be withdrawn.

I.   Claims 1 and 5-30 are Patentable Over Greene

Claims 1 and 5-30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Greene. For the following reasons, this rejection is respectfully traversed.

Claim 1 recites the step of "applying a suitable compression technique to [a] geometric feature," claims 6 and 13 recite "a compression module configured to receive [a] gradient signal and generate a compressed signal," claim 20 recites the step of "compressing [a] gradient of [a]

signal to generate a compressed signal" and claim 28 recites the step of "compressing [a]

gradient to generate a compressed signal."

The present invention is a system for providing accurate compression, storage,

transmission and reconstruction of data representing terrain and other physical or hypothetical

signals or surfaces in one or multiple dimensions. Greene, on the other hand, discloses a system

for the detection and extraction of features in images and displays. The system disclosed by

Greene is directed only towards the detection and extraction of the features and does not disclose,

teach or suggest the compression, transmission and reconstruction of the data containing features

that are detected/extracted. In fact, the words "compress," "decompress," and "reconstruct,"

"transmit" and "transmission" do not appear anywhere in the Greene disclosure.

The Office Action alleges that elements 22 (*see* Greene, FIG. 3), 106 (*see* Greene,

FIG.13), 136 and 140 (*see* Greene, FIG. 26) apply a compression technique to geometric features.

See Office Action, pp.2, 3 and 5. Additionally, the Office Action alleges that the compression

steps are disclosed at column 8, lines 54-58. *See* Office Action, pp.2, 3 and 5. Finally, the

Office Action alleges that "Greene normalizes the data by using statistics, parameters and

properties of the data [as explained in column 153 through column 156]" and that "this

corresponds to Applicant's compression of the data." *See* Office Action, pp.2, 3 and 5.

The elements in Greene cited by the Examiner, however, are merely computer processors

that may receive data signals, may extract/detect features (*see* Greene, col.15, ll.63-67, col.28,

ll.56-59, col.37, ll.49-55) and may output the detected/extracted features for display (*see, for ex.*

Greene, col.15, ll.67-68). None of the elements perform any type of compression on the data

prior to the extraction or after the extraction. Additionally, the cited portion of the Greene

disclosure merely discloses the evaluation of data by the computer processors 22 (*see* Greene, FIG. 3), 106 (*see* Greene, FIG.13), 136 and 140 (*see* Greene, FIG. 26) to perform the extraction/detection of features in a received image. Greene does not disclose, teach or suggest the compression of this data.

Finally, it appears the Examiner may have misinterpreted the meaning of "normalization" as it is being used in the Greene disclosure. The system disclosed by Greene merely gathers information, designs a deformable template to extract features and applies the result. *See* Greene, col.8, ll.17-19. The normalization process is merely a part of the designing of the deformable template and is not a compression step. While Greene may use the normalization process to extract geometrical features, the compression of the extracted data is not disclosed, taught or suggested. In contrast, the present invention teaches that a numerical approximation to a geometric feature may be computed, compressed and the image may later be retrieved.
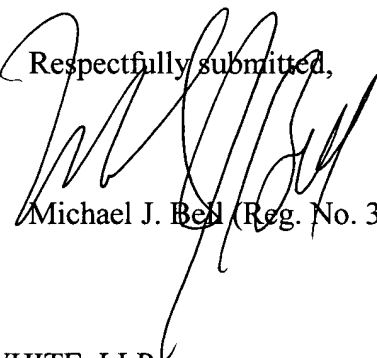
Because Greene fails to disclose, teach or suggest the claimed apparatus including the step of "applying a suitable compression technique to [a] geometric feature," the step of "compressing [a] gradient of [a] signal to generate a compressed signal" or the step of "compressing [a] gradient to generate a compressed signal," claims 1, 20 and 28 are allowable over Greene. Likewise, because Greene fails to disclose, teach or suggest "a compression module configured to receive [a] gradient signal and generate a compressed signal," claims 6 and 13 are allowable over Greene. Claims 5, 7-12, 14-19, 21-27, 29 and 30 all depend from one of claims 1, 6, 13, 20 and 28 and are allowable for at least these reasons. Therefore, the Applicant respectfully requests that the Examiner withdraw the rejection of claims 1 and 5-30.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. The Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

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